

What is claimed is:

1. A method for managing healthcare data which allows a healthcare user to assemble a virtual healthcare clinic, the method comprising the acts of:
  - a) providing a central data base system capable of holding health records, wherein said database is accessible through at least one public connection;
  - b) enrolling a plurality of healthcare practitioners to create a plurality of enrolled healthcare practitioners, wherein enrolling a healthcare practitioner comprises providing the healthcare practitioner with software operable on a computer system for reading information from medical portable access devices and writing treatment information including medical prescriptions, to said medical portable access devices;
  - c) enrolling a plurality of pharmacies to create a plurality of enrolled pharmacies, wherein enrolling a pharmacy comprises providing the pharmacy with software operable on a computer system for reading healthcare information including medical prescriptions written by one of the plurality of enrolled healthcare practitioners from said medical portable access devices, for writing a confirmation that a prescription has been filled to said medical portable access devices, and transmitting an electronic message to the one of said plurality of enrolled healthcare practitioners who wrote the prescription;
  - d) enrolling a patient member;
  - e) providing said patient member with a medical portable access device;
  - f) programming said medical portable access device provided to said member with healthcare information relevant to said patient member;
  - g) synchronizing the healthcare information on said medical portable access device with the healthcare information contained in said central data base; and
  - h) repeating acts (d), (e), (f) and (g) for a plurality of patient members creating a plurality of enrolled patient members each having a medical

29 portable access device, whereby by an enrolled patient member can create a  
30 virtual clinic of healthcare providers by choosing enrolled healthcare  
31 practitioners and enrolled pharmacies and presenting the portable access  
32 device provided to the member for updating at healthcare treatments and  
33 prescription fulfillment.

1 2. The method of claim 1 further comprising the act of providing a plurality of patient  
2 members with software operable on a computer system for reading the contents of  
3 their medical portable access device, and writing updated information on the  
4 medical portable access device.

1 3. The method of claim 2 wherein each medical personal access device is a smart  
2 card.

1 4. The method of claim 3 further comprising providing enrolled healthcare  
2 practitioners, enrolled pharmacies, and enrolled patient members with software  
3 functionality for optional connection to the central database system during use of a  
4 portable access device, and wherein the central database is synchronized with the  
5 portable access device approximately contemporaneously with writing to the  
6 personal access device if the central database is optionally connected.

1 5. The method of claim 4 further comprising providing software functionality to  
2 enrolled pharmacies which causes an enrolled pharmacy to send an electronic  
3 confirmation to a healthcare provider and to send an electronic confirmation to the  
4 central data base when the enrolled pharmacy fulfills a prescription prescribed by  
5 the health provider.

1 6. The method of claim 5 further comprising providing software enrolled healthcare  
2 practitioners, enrolled pharmacies, and enrolled patient members with software  
3 functionality for authenticating the identity of users.

- 1 7. A method for managing dispensation of medicine to a patient comprising the acts  
2 of:
- 3 a) choosing a prescription for a patient, wherein said act of choosing a  
4 prescription is performed by a healthcare practitioner;
  - 5 b) entering the prescription into a first computer memory on the health  
6 practitioner's computer system;
  - 7 c) writing the prescription to a portable access device under control of said  
8 healthcare practitioner's computer system;
  - 9 d) transmitting a first electronic message containing said prescription to a  
10 central healthcare information database system, wherein said central  
11 healthcare information database system comprises healthcare information  
12 pertaining to the patient, and said step of transmitting a first electronic  
13 message occurs under control of said healthcare practitioner's computer  
14 system and occurs approximately contemporaneously with writing said  
15 prescription to said portable access device;
  - 16 e) reading said prescription to a second computer memory on a pharmacy  
17 computer system from said portable access device;
  - 18 f) reading an identifying code from a drug container into a third computer  
19 memory on the pharmacy computer system;
  - 20 g) verifying the prescription by comparing said third computer memory to said  
21 second computer memory to determine whether said identifying code  
22 corresponds to the prescription;
  - 23 h) recording a confirmation onto said portable access device indicating that  
24 the prescription has been filled, after the prescription is verified, wherein  
25 said act of recording a code is performed under control of said pharmacy  
26 computer system;
  - 27 i) transmitting a second electronic message to said practitioner's computer  
28 system indicating that the prescription has been filled, wherein the act of  
29 transmitting the second electronic message is carried out under the control

30 of said pharmacy computer system and occurs approximately  
31 contemporaneously with the recording the confirmation onto said portable  
32 access device; and  
33 j) transmitting a third electronic message to said central healthcare  
34 information database system indicating that the prescription has been filled,  
35 wherein the act of transmitting the third electronic message is carried out  
36 under the control of said pharmacy computer system and occurs  
37 approximately contemporaneously with the recording the confirmation  
38 onto said portable access device.

1 8. The method of claim 7 wherein the portable access device comprises a smart card.

1 9. The method of claim 8 further comprising transmitting a fourth electronic message  
2 containing said prescription to a pharmacy computer system, wherein said step of  
3 transmitting a fourth electronic message occurs under control of said healthcare  
4 practitioner's computer system and occurs approximately contemporaneously with  
5 writing said prescription to said portable access device.

1 10. The method of claim 8, further comprising the step of utilizing drug prescribing  
2 support software operating on the physician's computer system in the act of  
3 choosing a prescription.

1 11. The method of claim 8 wherein the healthcare practitioner's computer system is  
2 remotely connected to the central healthcare information database system during  
3 steps (b),(c), and (d) of claim 1, and the method further comprises the act of  
4 authenticating said healthcare practitioner to the central healthcare information  
5 database system.

1 12. The method of claim 11 wherein the act of authenticating comprises making a  
2 biometric measurement.

1 13. The method of claim 11, further comprising the act of updating the healthcare  
2 information pertaining to said patient in the central healthcare information database  
3 system, approximately contemporaneously with writing said prescription to said  
4 smart card.

1 14. The method of claim 11 wherein the healthcare practitioner's computer system is  
2 remotely connected to the central healthcare information database system during  
3 step (a) of claim 1, and the method further comprises utilizing drug prescribing  
4 support software operating on the central healthcare information database system  
5 and remotely provided to the healthcare practitioner's computer system in the act  
6 of choosing a prescription.

1 15. The method of claim 8 further comprising the act of determining whether the  
2 prescription is appropriate for the patient using drug evaluation software operating  
3 on the pharmacy computer system.

1 16. The method of claim 8 wherein the pharmacy computer system is remotely  
2 connected to the central healthcare information database system during steps (e),  
3 (f), (g), (h), (I) and (j) of claim 1, and the method further comprises authenticating  
4 said pharmacy computer system to the central healthcare information database  
5 system.

1 17. The method of claim 16 further comprising the act of determining whether the  
2 prescription is appropriate for the patient utilizing drug evaluation software  
3 operating on the on the central healthcare information database system and  
4 remotely provided to the pharmacy computer system.

1 18. The method of claim 16 further comprising the act of updating the healthcare  
2 information pertaining to said patient in the central healthcare information database

3 system, approximately contemporaneously with recording the confirmation onto  
4 said portable access device.

1 19. A healthcare information system comprising:

- 2 a) a central data base system comprising a central data base containing  
3 healthcare information pertaining to a plurality of patients, said central  
4 data base system accessible by at least one external connection;
- 5 b) a plurality of medical portable access devices, wherein each of said plurality  
6 of patients has at least one medical portable access device;
- 7 c) a plurality of healthcare practitioner computer systems, each healthcare  
8 practitioner computer system comprising a device for reading and writing  
9 to any of said plurality of medical portable access devices, an external  
10 communication connection, and software operating said healthcare  
11 practitioner computer system, comprising functionality for reading  
12 healthcare information pertaining to a patient from said medical portable  
13 access devices, writing a record of treatment to said medical portable  
14 access devices, writing a prescription to any of said plurality of medical  
15 portable access devices, and sending at least one electronic message when a  
16 prescription is written to a portable access device; and
- 17 d) a plurality of pharmacy computer systems, each pharmacy computer system  
18 comprising a device for reading and writing to any of said plurality of  
19 medical portable access devices, an external communication connection,  
20 and software operating said pharmacy computer system, comprising  
21 functionality for reading healthcare information pertaining to a patient from  
22 said medical portable access devices, reading a prescription from said  
23 medical portable access devices, writing a confirmation that a prescription  
24 has been filled and decrementing a refills counter pertaining to a filled  
25 prescription to said portable access devices, and sending at least one  
26 electronic message when a prescription is fulfilled.

1 20. The healthcare information system of claim 19 further comprising a plurality of  
2 patient computer systems, each patient computer system comprising a device for  
3 reading and writing to any of said plurality of medical portable access devices, an  
4 external communication connection, and software operating said patient computer  
5 system, comprising functionality for reading healthcare information pertaining to a  
6 patient from said portable access devices, and writing updated health history  
7 information to said portable access devices.

1 21. The healthcare information system of claim 20 wherein said healthcare provider  
2 computer systems, said pharmacy computer systems and said patient computer  
3 systems further comprise software functionality for optional connection to said  
4 central database system, obtaining information from said central database system,  
5 and synchronizing a portable access device to the central database system when the  
6 portable access device is accessed.

1 22. The healthcare information system of claim 21 wherein said healthcare provider  
2 computer systems, said pharmacy computer systems, and said patient computer  
3 systems further comprise a biometric measurement device for authenticating users.

1 23. The healthcare information system of claim 21 wherein the database system further  
2 comprises software functionality for synchronizing information between a portable  
3 access device and the central database when a portable access device is accessed  
4 by a computer system which is connected to the central database.

1 24. The healthcare information of claim 22 wherein said healthcare provider computer  
2 systems, said pharmacy computer systems, and said patient computer systems  
3 further comprise software functionality for authenticating a user using said  
4 biometric measurement device.